

NOTES
Location: Interstate mainline road gates shall be located approximately 20 feet beyond the in place gore sign. Interstate ramp road gate shall be located approximately 20 feet beyond the end of the outside ramp radius. Other roadway locations shall be as directed by the Engineer in the field.

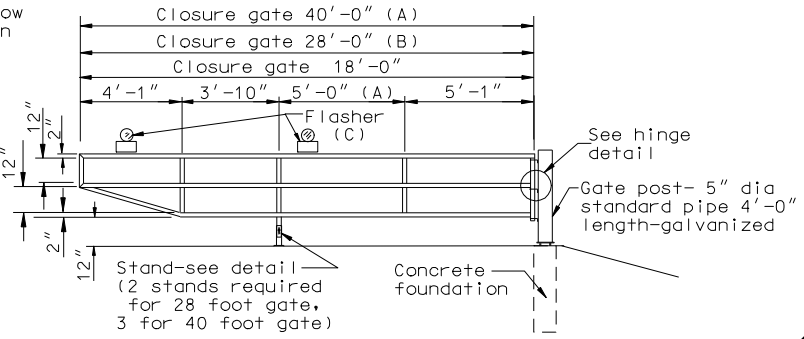
GATE: Gate shall be constructed of 2 inch square aluminum tubing conforming to ASTM B-308. The wall thickness shall be 0.125 inches.

GENERAL: All fittings and accessories shall be galvanized.

Cable shall be $\frac{3}{8}$ inch diameter and galvanized.

The tubing shall be covered with red & white reflectorized tape in all areas which face traffic except the 4'-1" taper area.

ROAD CLOSURE GATE DETAIL



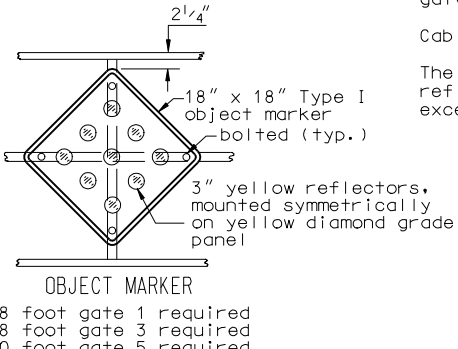
GATE DETAILS

(A) For 40 foot gate add 20 feet with 4 additional vertical supports spaced at 5'-0" centers and increase the 3' -10" spacing to 5' -10".
(B) For 28 foot gate add 10 feet with 2 additional vertical supports spaced at 5'-0" centers.
(C) 3 Type "B" high intensity flashing warning lights required for 40' gate.

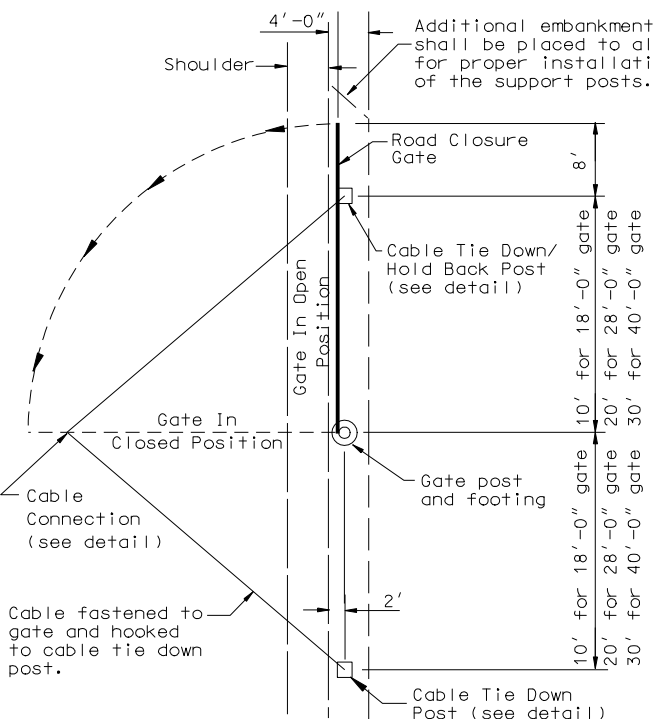


Hinged W20-3-48 sign shall be installed on both sides of the roadway in advance of the mainline closure gate. Sign supports shall have provisions for mounting type B high intensity flashing warning lights.

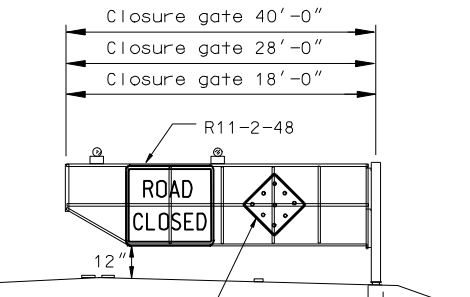
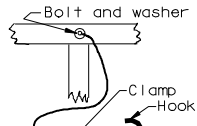
SIGNING DETAILS



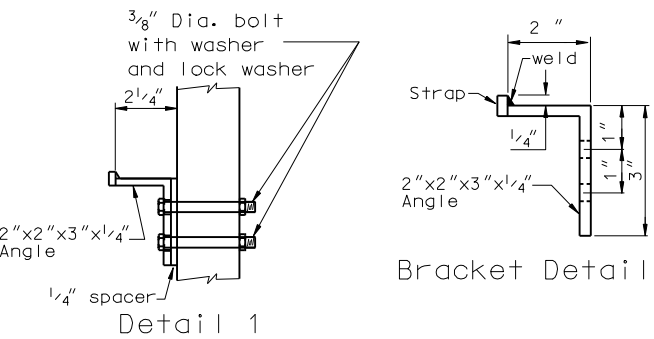
GATE DETAIL



CABLE DETAIL

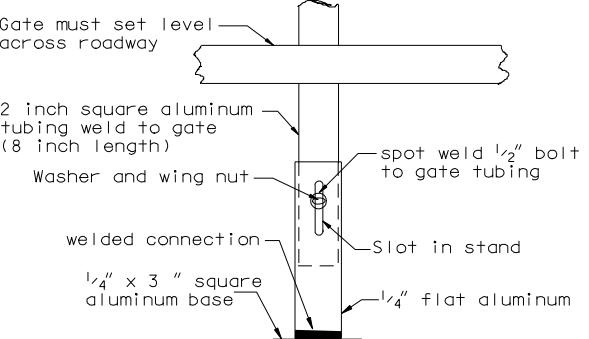


GATE IN CLOSED POSITION

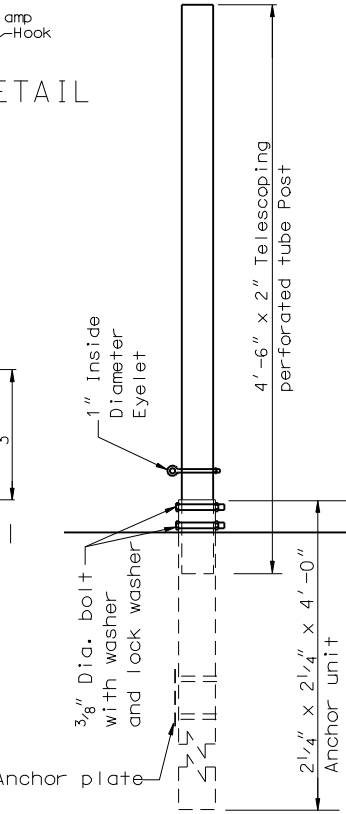


Telescoping Perforated Tubes						
Tube Size In.	Wall Thickness In.	U.S. Standard Gauge	Weight Per Foot Lbs.	Moment of Inertia In ⁴	Cross section area In ²	Section Modulus In ³
2 x 2	0.105	12	2.416	0.372	0.590	0.372
2 1/4 x 2 1/4	0.105	12	2.773	0.561	0.695	0.499

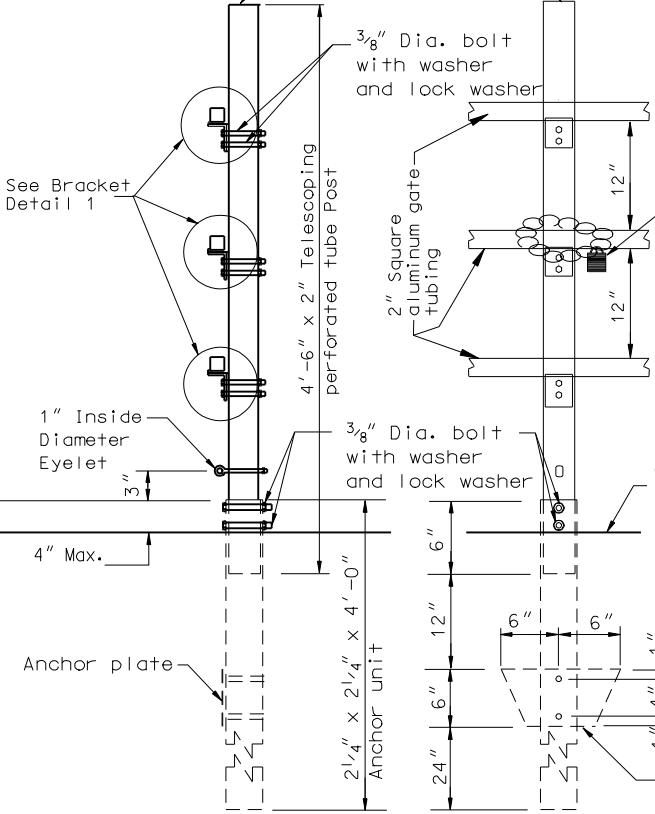
STAND DETAIL



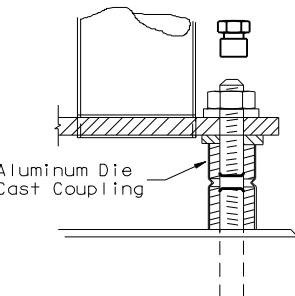
CABLE TIE DOWN POST DETAIL



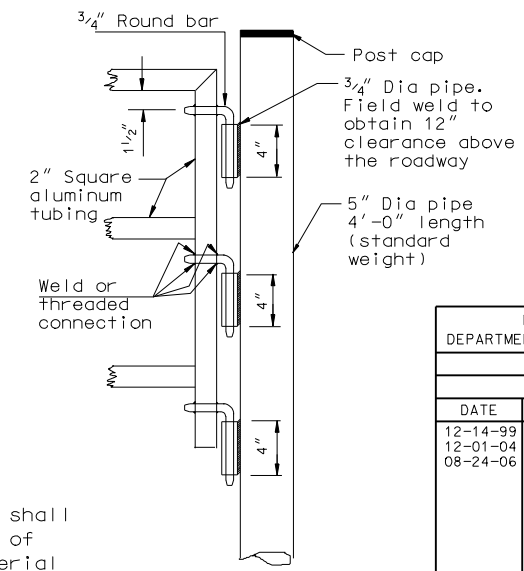
CABLE TIE DOWN/HOLD BACK POST DETAIL



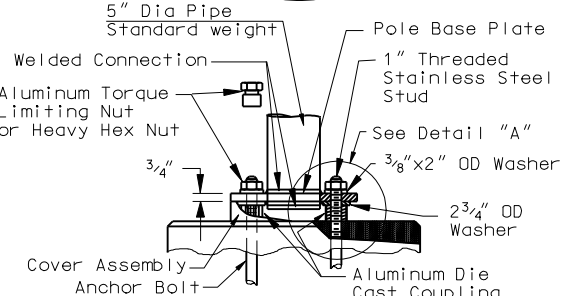
DETAIL "A"



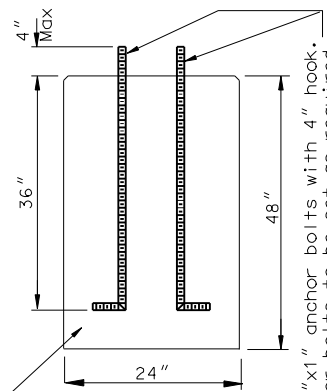
HINGE DETAIL



GATE POST BREAKAWAY DETAIL



GATE POST FOOTING DETAIL



NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
09-09-99	
REVISIONS	
DATE	CHANGE
12-14-99	General revisions
12-01-04	PE Stamp added
08-24-06	Added 40' gate

This document was originally issued and sealed by MARK S GAYDOS, Registration Number PE-4518, on 08/24/06 and the original document is stored at the North Dakota Department of Transportation